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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/591,181	08/30/2006	Hirofumi Nozawa	293599US3PCT	7758
22850	7590	12/22/2008		
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER				
IRVIN, THOMAS W				
ART UNIT		PAPER NUMBER		
3657				
NOTIFICATION DATE		DELIVERY MODE		
12/22/2008		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com  
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### Office Action Summary

**Application No.**

10/591,181

**Applicant(s)**

NOZAWA ET AL.

**Examiner**

THOMAS W. IRVIN

**Art Unit**

3657

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 31 October 2008.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 14-30 and 32-34 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 14-30, 32-34 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-8508)  
Paper No(s)/Mail Date \_\_\_\_\_

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 31 October 2008 has been entered.

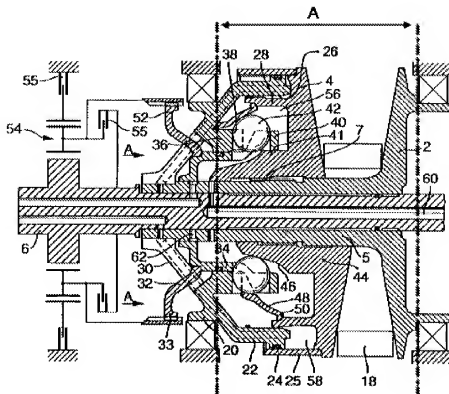
### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 14-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Schmid (6,669,588).



**Fig. 4 (US 6,669,588)**

In Re claims 14 and 25, with reference to Fig. 4 shown above, Schmid discloses a belt type continuously variable transmission comprising: a pulley shaft (6) that is supported by a first and second bearing (depicted as blocks with X's) that are spaced apart axially; a supply oil passage (30,60,62) that supplies hydraulic fluid to a pulley hydraulic chamber (56,58) and includes a radial direction oil passage (60,62) that extends in the pulley shaft in a radial direction of the pulley shaft (see fig. 2); a movable sheave (4,44) that is attached to the pulley shaft; and a cylinder member (22,34) that is attached to the pulley shaft and faces the movable sheave, wherein the radial direction oil passage is formed in the pulley shaft outside of a portion of the pulley shaft that is between the bearings (A), and an outer peripheral surface of an inner cylindrical portion

of the movable sheave contacts and partially slides on an inner peripheral surface of a first cylindrical portion of the cylinder member (see annular sleeve (28)).

In Re claim 15, one of the bearings is provided near the radial direction oil passage and on an outer surface side of a cylinder member whose inner surface side forms the pulley hydraulic chamber for the movable sheave that is attached to the pulley shaft so as to be fixed with respect to the pulley shaft in a rotational direction of the pulley shaft and so as to be slidable in the axial direction of the pulley shaft.

In Re claims 16 and 17, see spline (7).

In Re claim 18, the pulley hydraulic chamber includes a first hydraulic chamber (58), and the first hydraulic chamber is limited at least in part by a back surface of the movable sheave (4,44) and the cylinder member which faces the movable sheave.

In Re claim 19, the pulley hydraulic chamber includes a second hydraulic chamber (56), and the second hydraulic chamber is limited at least in part by an end surface of the inner cylindrical portion of the movable sheave and the cylinder member.

In Re claims 20 and 23, the cylinder member includes a first and second radial direction portion and a first and second cylindrical portion (see sensing piston (34), seal support (20) and cylindrical region (22)).

In Re claim 21, see chamber (58), fixed annular element (25) and annular sleeve (28).

In Re claim 22, see chamber (56), annular sleeve (28), cylindrical region (22), and seal support (20).

In Re claim 24, the apparatus of Schmid appears to operate in this manner.

In Re claim 26, a load applied to the movable sheave can be transmitted to the cylinder member.

In Re claim 27 and 31, see Fig. 4.

In Re claims 28-30, see spline (7).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 32-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmid (6,669,588) as applied to claims 14-30 above, and further in view of Kashiwase (5,561,934).

Schmid discloses the claimed invention except failing to teach a movable sheave oil passage.

Kashiwase teaches, with reference to fig. 1, that it was well known in the art to provide a pulley hydraulic chamber (560) with oil provided through a movable sheave (550b) passage, spline passage (550c), and supply oil passage in the pulley shaft (520). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the CVT of Schmid to route the hydraulic oil through a passage formed in the movable pulley sheave and spline portion, as taught by

Kashiwase, in order to provide lubrication and cooling to the spline connection between the shaft and movable sheave, without changing the performance of the pulley.

### ***Response to Arguments***

Applicant's arguments with respect to claims 32-34 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's arguments filed 31 October 2008 with respect to claims 14-30 have been fully considered but they are not persuasive.

In Response to applicant's arguments that the radial oil supply passages of Schmid are between the bearings, the examiner has included an annotated copy of Fig. 4 from Schmid with dashed lines clearly showing the portion (A) located between the bearings, which does not include any of the radial oil supply passages.

Additionally, the examiner suggests amending the claims to specifically recite that the bearings are located on opposite sides of the movable sheave, and that the portion of the shaft between the bearings includes a fixed sheave and the portion of the shaft supporting the movable sheave.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to THOMAS W. IRVIN whose telephone number is (571)270-3095. The examiner can normally be reached on Mon-Fri 9am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Siconolfi can be reached on (571) 272-7124. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Thomas W. Irvin/  
Examiner, Art Unit 3657

/Robert A. Siconolfi/  
Supervisory Patent Examiner, Art  
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